Shielded Metal Arc Welding (SMAW)

WLD 120 and WLD121

Allen County Technical Center

2015-2016 Course Syllabus

**Instructor:** Paul Spears

**Classroom:** 135

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**Course Description** **& Prerequisite**

The course consists of the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy.

Prerequisite: none.

**Course Objectives**

Upon completion of the course, students will have developed and demonstrated an understanding of the following:

* Welding safety
* Identification, selection, and storage of SMAW electrodes
* Setup and use of SMAW welders
* Proper usage of shop equipment and tools

**Materials:**

1. Materials that the student must purchase are a **1” binder with paper, a scientific calculator or equivalent,** and a **pen and/or pencil**. The instructor will not provide these materials.
2. Textbooks will be provided during class, and turned back in at the end of the class each day. If books are misused or damaged, the student will be required to pay for the book.

**Attendance & Handbook Policies:**

1. All handbook policies will be enforced, along with a set of classroom and shop rules outlined on the agreement that will be signed by the student and parent.
2. Attendance and tardies will be strictly enforced. If a quiz or exam is missed, the student will be responsible for taking the test as soon as they return. If test or quiz is not made up within a week upon return, the student will receive a 0.
3. Attendance will also be taken into consideration in determining the student’s Work Ethics Grade.

**Grading & Evaluation:**

Grading will be based on a point system. To calculate grades, the students should simply take the amount of points he or she has earned and divide by the total amount of points possible.

\*Example: Suzie earned 890 points out of a total of 1100 points. She would divide 890/1100=.809. In changing the decimal to a percentage, she would have earned an 81% (B) in the class.

Quizzes – points may vary between 10-20 points each

Test/Shop Activities – points may vary between 100-200 points each

Work Ethic Grade – Students will receive a Work Ethics grade for each 9 week period; 100 points each. These points will be earned daily through participation and conduct.

Final – The final exam will count 20% of the student’s final grade.

**Grading Scale:**

90-100% = A

80-89% = B

70-79% = C

60-69% = D

below 60% = F

Subject matter on this document is subject to change at the teacher’s discretion at any time.

**Task List for SMAW**

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| * Practice welding safety procedures |
| * Identify, select, and store SMAW electrodes |
| * Apply principles of SMAW process to cut and weld metals |
| * Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe |
| * Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel |
| * Use shop equipment and tools |